

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
7 July 2005 (07.07.2005)

PCT

(10) International Publication Number
WO 2005/061536 A1

- (51) International Patent Classification⁷: **C07K 14/47, A61K 38/17**
- (21) International Application Number:
PCT/US2004/038671
- (22) International Filing Date:
18 November 2004 (18.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/529,575 16 December 2003 (16.12.2003) US
- (71) Applicant (*for all designated States except US*): AVEN-TIS PHARMACEUTICALS INC. [US/US]; 300 Somerset Corporate Boulevard, Bridgewater, NJ 08807-2854 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): MERRILL, Jean [US/US]; 101 Alpine Lane, Whippany, NJ 07981 (US). YAO, Zhengbin [US/US]; 5230 Weatherstone Circle, Sugar Land, TX 77479 (US). PETKO, Wayne [US/US]; 71 Remsen Street, South Bound Brook, NJ 08880 (US). KHORKOVA, Olga [US/US]; 570 Manchester Avenue, North Haledon, NJ 07508 (US). KEESLER, George [US/US]; 99 Perrine Pke, Hillsborough, NJ 08844 (US). WANG, Min [US/US]; 302 Centennial Drive, Blue Bell, PA 19422 (US).
- (74) Agents: KRUPEN, Karen, I. et al.; Aventis Pharmaceuticals Inc., Route 202-206, P. O. Box 6800, Bridgewater, NJ 08807-0800 (US).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*
- *of inventorship (Rule 4.17(iv)) for US only*

Published:

- *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/061536 A1

(54) Title: SECRETED NEURAL APOPTOSIS INHIBITING PROTEINS

(57) Abstract: A novel neuroprotectant was identified by microarray analysis that is differentially expressed between the ventricular zone and the cortex of human adult and fetal brain. The secreted protein antagonizes Wnt action in *Xenopus* embryos. Methods are described for modulating free radical neurotoxicity by contacting cells with the protein, treating neuronal diseases associated with free radical-mediated cell death by administering the protein, determining neuroprotective genomic targets associated with select free radical toxicity pathways by screening with the protein and using the protein to identify other compounds that modulate the biological activity of the secreted protein and the cell machinery that reacts to the secreted protein.